

Remarks

Reconsideration of this Application is respectfully requested. Claims 1, 3-16, 19 and 20 are pending in the application, with claims 1, 4, 15, and 16 being the independent claims.

Rejections under 35 U.S.C. § 103

Claims 1, 3-16, 19 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,761,557 to Gellert et al. in view of U.S. Patent No. 6,043,446 to Jenko et al. and further in view of U.S. Patent No. 5,411,392 to Von Buren.

The Examiner stated in the Office Action that

Gellert ('557) teaches a nozzle body having a melt channel with a first heater (102/106) securely attached to the nozzle body. However, Gellert et al. ('557) does not teach a second heater being slideably attached and partially overlapping the first heater. Both Jenko et al. ('446) and Von Buren ('392) teach a slide-on heater clamp (100) designed for clamping to an object for heating purposes, especially a nozzle or a hot runner channel (see Abstract). Depending on how far up the body of a nozzle the clamp heater is placed would determine whether or not the first heater of a hot runner channel and the second heater would overlap. However, neither Gellert et al. or Jenko et al. provides clear motivation for using a secondary heater, as either a solution for repairing or for providing additional heat for an already-heated nozzle. Von Buren teaches the use of a slide-on, clampable heater as both a repair solution ((Col. 3, line 24-

27) and as a solution for providing heat in an already-heated nozzle (Col. 3, line 16-21).

Office Action, pages 2-3. The Examiner further stated that

it would have been obvious to one skilled in the art to have modified the heated hot runner melt nozzle of Gellert ('557) with the advanced heater clamp of Jenko et al. ('455) [*sic*, ('466)] and used in a manner as taught by Von Buren in order to provide a nozzle that can be operated in at a potentially higher temperature than originally designed, or as a temporary repair to a hot melt runner nozzle that has experienced a heater failure.

Office Action, p. 4. Applicant respectfully traverses the rejection.

Despite acknowledging that Jenko et al. does not provide motivation to modify Gellert, the Examiner not only again relies upon Jenko et al., but uses the same hindsight reasoning to add Von Buren to the rejection. The lack of motivation in Jenko et al. has been documented throughout several responses and the Appeal Brief filed by Applicant. Regarding Von Buren, the Examiner extrapolates statements in the Von Buren specification that do not support the Examiner's conclusions.

The Examiner relies on col. 3, lines 24-27 to support his conclusion that Von Buren teaches to use a clampable heater as a "temporary repair to a hot melt runner nozzle that has experienced a heater failure." Col. 3, lines 24-27 of Von Buren are read that "[t]he heater can easily be installed and removed any number of times with no concern of damage and the manufacturing tolerances of the fitting diameters is substantially more liberal." This does not mention that the heater can be used as a temporary repair. It only states that once a clamp heater has been selected *instead of* an integrated heater, such a clamp heater can be replaced. Thus, Von Buren, like Jenko et

al., discusses that the clamp heater is to be used *instead of*, not in addition to, an integrated heater.

The Examiner relies on col. 3, lines 16-21 of Von Buren to support his conclusion that Von Buren teaches “a solution for providing heat in an overlapped area of an already-heated nozzle.” Office Action, page 3. Von Buren reads that “[a] further advantage over a coil heater is the inherent unheated area at the split of the heater band. In nozzle where an eccentrically located melt channel is employed, it can be position directly over the melt channel in the nozzle, prevent local over heating of the plastic melt.” Col. 3, lines 16-21. It is unclear how the Examiner interprets this to teach that the clamp heater should be used in an overlapped area of an already-heated nozzle. The passage specifically teaches that the clamped heater has an advantage over, *i.e.*, instead of, a coil heater. An eccentrically located melt channel is closer to one side of the nozzle than the other. Using a coil heater that wraps around a nozzle causes an unbalanced heating because one side of the heater is closer to the nozzle than the other side. However, by using the Von Buren heater *instead of* an integrated coil heater, Von Buren explains that the “inherent unheated area” of the clamp, gap 59, can be placed over the melt channel to prevent this unbalanced heating. This passage does not refer to placing the clamp heater of Von Buren in an already-heated versus unheated area of the nozzle. As it does throughout the specification, Von Buren instead explains why it advantageous to use its clamp heater instead of a coil heater. Thus, Von Buren does not provide the requisite motivation to combine it with Gellert et al. and/or Jenko et al.

Further, Jenko et al. and Von Buren specifically teach away from the proposed combination. Jenko et al. teaches that its clamp heater is *a replacement for, not an addition to*, embedded or integrated type heaters. In particular, Jenko et al. states,

Integrated electrical heaters are very expensive, very difficult to manufacture, and impossible to replace, unless one sacrifices the entire nozzle. In many instances, it is preferable to use removable electrical heaters that are less expensive, can be easier manufactured, assembled, tested, and serviced. One major problem that has not been solved satisfactory so far is related to the clamping of the heater to the element to be heated so that an intimate thermal contact is established with minimal loss.

Jenko et al., col. 1, lines 25-33. Similarly, Von Buren states:

Some nozzle manufacturers go through the costly process to integrate heaters into the nozzle body. The primary disadvantage with this approach however is that should the heater get damaged the nozzle is lost as well. Thus, it is preferred that the heating element be removably mounted onto the nozzle body for ready replacement.

Von Buren, col. 1, lines 18-24. Thus, it is clear that Jenko et al. and Von Buren are directed to improving clamp-type heaters, and that such clamp-type heaters are to be used instead of, not in addition to, the "very expensive, very difficult to manufacture, and impossible to replace" and "costly" integrated electrical heaters. Accordingly, Jenko et al. and Von Buren do not support the Examiner's proposition that they provide a teaching to add such a clamp heater to an already heated portion of a nozzle. "It is improper to combine references where the references teach away from their combination." MPEP § 2145.X.D.i.

For the reasons set forth above, independent claims 1, 4, 15, and 16 would not have been obvious in view of the Gellert et al., Jenko et al., and Von Buren patents.

Claims 3, 5-14, 19 and 20 depend from and add features to one of the listed independent claims and are therefore allowable over the Gellert et al., Jenko et al., and Von Buren patents for at least the same reasons as the independent claim from which they depend. Applicant therefore respectfully requests that the rejection be withdrawn.

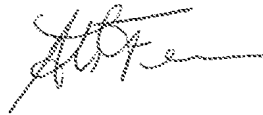
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'A. L. Ferro', with a stylized flourish at the end.

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